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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/918,967	07/31/2001	Scott-Thanh D. Ngo	TI-32407	2559
23494	7590	04/17/2006	EXAMINER	
TEXAS INSTRUMENTS INCORPORATED P O BOX 655474, M/S 3999 DALLAS, TX 75265			HARPER, KEVIN C	
			ART UNIT	PAPER NUMBER
			2616	

DATE MAILED: 04/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/918,967

Applicant(s)

NGO, SCOTT-THANH D.

Examiner

Kevin C. Harper

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-14,16-23,25-27,48 and 49 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8,9,12,13,23,25-27,48 and 49 is/are allowed.
- 6) ☒ Claim(s) 1,10,11,14 and 16-22 is/are rejected.
- 7) ☒ Claim(s) 4-7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Arguments

Applicant's arguments, filed February 1, 2006 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, the indicated allowability of claim 3 (presently claim 1) is withdrawn and a new grounds of rejection is made in view of Miyauchi. Rejections based on the newly cited reference follow. Upon further consideration the indicated allowability of claims 15 (presently claim 14) and 18 is withdrawn.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 14 and 16-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Krivosheev et al. (US 3,995,105).

1. Regarding claims 14 and 18, Krivosheev discloses a semiconductor device (col. 7, lines 5-15) comprising a pulse sequence counter (fig. 1, item 10; fig. 5, item 64; col. 18, lines 4-7) coupled to an input/output node (fig. 1, item 9; col. 17, lines 41-55) to count the number of pulses received at the node, a first storage location to store a first count result (col. 18, lines 5-6; note: the count is stored therein - col. 18, lines 7-9), and a pulse generator (fig. 10, item 62) for generating a specified length sequence of pulses which is one less than the number of pulses received at the input/output node (col. 18, lines 15-25; note: when the number of pulses received in the second group is one, the number of transmitted pulses is the number of received pulses in

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the first group minus one.) Although Krivosheev does not disclose a semiconductor device that uses the first count result as a device identifier, the structure of the semiconductor device of Krivosheev meets the structure of the claimed semiconductor device - MPEP 2114.

2. Regarding claim 16, a second sequence of pulses is received at a second input/output node (fig. 1, item 7 or 8).

3. Regarding claim 17, a second storage location stores a second count result (fig. 5, item 65).

4. Regarding claim 19, the device includes a controller (fig. 5, item 63) coupled to and controlling the first storage location, counter and the pulse generator (col. 18, lines 15-25).

5. Regarding claims 20-22, the semiconductor device is a microcontroller and a microprocessor (col. 18, lines 12-20; fig. 1, item 17) and a finite state machine (fig. 7; col. 21, lines 23-30).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 10-11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kizu (US 2004/0179511) in view of Downey, Jr. et al. (US 2002/0126574) and Miyauchi (US 2002/0083161).

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6. Regarding claims 1 and 13, Kizu discloses a method for device counting (note: “distributed device identifier number assignment” is only found in the preamble and has not been given patentable weight *1; Kizu, fig. 1, registration step) comprising transmitting from a slave and receiving at a master a first sequence of received pulses (fig. 1, slave M and slave S1), determining a unique device identifier based on the sequence of received pulses (para. 56, lines 6-9; para. 58, last four lines; para 61, lines 1-4; para. 56, lines 3-6; note: the communication includes inherent physical pulses or burst to achieve communication - para. 81), transmitting and receiving a second sequence of pulses (fig. 1, slaves S2-S4) and determining a device count based on the first and second sequences of received pulses (para. 76; note: the received sequence of pulses is any group of data received at the master).

7. However, Kizu does not disclose serially connected chain of devices. Downey discloses serially connected slave devices (fig. 6). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have serially connected slave devices in the invention of Kizu in order to provide a simple device structure (Downey, para. 25, last three lines).

8. Further, Kizu in view of Downey does not disclose initializing first and second memory locations both to a value that is equal to a maximum allowed number of devices in the serially connected chain. Miyauchi discloses a storing in a first and second memory location the maximum number of communications apparatuses that can be connected to respective first and second master devices (para. 138, lines 1-3; figs. 1 and 8; para. 96, lines 5-8). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to initialize first and second memory locations in the invention of Kizu in view of Downey in order to

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prevent a high loading condition on respective first and second master devices (Miyauchi, para. 214, lines 1-8; Kizu, para. 130; para. 143, lines 1-5).

(*1 - A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

9. Regarding claims 10-11, the first received sequence and the first transmitted sequence are received and transmitted over different input/output connections (fig. 3, items 11-12; para. 81; note: the transmission from a slave is received by a master).

Allowable Subject Matter

10. Claims 8-9, 12-13, 23, 25-27 and 48-49 are allowed.

11. Claims 4-7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Harper whose telephone number is 571-272-3166. The examiner can normally be reached weekdays from 11:00 AM to 7:00 PM ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To, can be reached at 571-272-7629. The centralized fax number for the Patent

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Office is 571-273-8300. For non-official communications, the examiner's personal fax number is 571-273-3166 and the examiner's e-mail address is kevin.harper@uspto.gov.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications associated with a customer number is available through Private PAIR only. For more information about the PAIR system, see portal.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kevin C. Harper

April 16, 2006